WHAT IS CLAIMED IS:

1. A light emitting diode (LED) module for mounting on a heat conducting surface that is substantially larger than the module, the module comprising:

a plurality of LED packages, each package comprising an LED and at least one lead; and

a circuit board, the circuit board comprising:

a thin dielectric sheet;

a plurality of electrically-conductive contacts on a first side of the dielectric sheet, each of said plurality of contacts being configured to mount a lead of an LED package such that said plurality of LEDs is series connected; and

a heat conductive plate on a second side of said sheet, said plate having a first side in thermal communication with the plurality of contacts through said dielectric sheet, said first side of said plate having a surface area substantially larger than a contact area between the contacts and the dielectric sheet, said plate having a second side adapted to provide thermal contact with the heat conducting surface, whereby heat is transferrred from the module to the heat conducting surface.

2. The LED module of Claim 1, wherein the contacts are substantially flat and coplanar relative to each other.

3. The LED module of Claim 2, wherein the plate is substantially flat and parallel to the contacts.

4. The LED module of Claim 1, wherein each of the contacts has a portion disposed generally adjacent an edge of the circuit board.

5. The LED module of Claim 4, wherein the plurality of LED packages are disposed adjacent one edge of the circuit board.

6. The LED module of Claim 5, wherein the LED packages comprise lenses for directing light from the LED in a desired direction, and the LED packages are arranged so that light from the LEDs is directed generally parallel to the circuit board.

7. The LED module of Claim 1, wherein the number of contacts is greater than the number of LED packages.

8. The LED module of Claim 7, wherein the number of contacts is one greater than the number of LED packages.

9. The LED module of Claim 1, wherein the surface area of the first side of the plate is greater than a combined surface area of one side of all of the contacts.

10. The LED module of Claim 1, wherein each of the contacts has a bonding area wherein at least one of the leads of an associated LED package is attached to the contact.

11. The LED module of Claim 10, wherein an overall surface of each contact is substantially larger than the bonding area of the contact.

12. The LED module of Claim 1, wherein the heat conducting surface behaves as a heat sink.

13. The LED module of Claim 1, wherein the dielectric layer comprises an epoxy.

14. The LED module of Claim 1, wherein the plate is bendable.

15. The LED module of Claim 1, wherein the plate has a thermal conductivity greater than about 100 W/mK.

16. The LED module of Claim 15, wherein the plate comprises a metal.

17. The LED module of Claim 16, wherein the plate comprises aluminum.

18. The LED module of Claim 15, wherein the plate is electrically non-conductive.

19. The LED module of Claim 1, additionally comprising an electrically non-conductive flexible film disposed adjacent the contacts on a side of the contacts opposite the plate.

20. The LED module of Claim 19, wherein the film comprises reflective film, and the reflective film extends outwardly from the module beyond the LED packages.

21. The LED module of Claim 20, wherein the film is attached to the module with at least one rivet.

22. The LED module of Claim 20 in combination with a second strip of reflective film that is attached to the heat conducting surface adjacent an edge of the circuit board, and the plurality of LED packages is disposed adjacent the edge of the

circuit board so that the LED packages are positioned between the first reflective film and the second reflective film.

23. The LED module of Claim 1, wherein the module comprises five pre-packaged, pre-focused LED lamps and six contacts, and the LED lamps are disposed adjacent an edge of the circuit board.

24. The LED module of Claim 23, wherein the module is about .05 inches thick, 1 inch long, and 0.5 inches wide.

25. A self-contained illumination apparatus comprising the LED module of Claim 1 in combination with a heat conductive base plate having a mount tab, and the LED module is mounted onto the mount tab.

26. The self-contained illumination apparatus of Claim 25, wherein the LED module is mounted onto the mount tab with at least one rivet.

27. The self-contained illumination apparatus of Claim 25, wherein the base plate behaves as a heat sink.

28. The self-contained illumination apparatus of Claim 25 additionally comprising a housing substantially surrounding the LED module, the housing having a cavity, and the LED module positioned to direct light out of the cavity.

29. The self-contained illumination apparatus of Claim 25, wherein the apparatus is mounted on a substantially vertical mount surface.

30. The self-contained illumination apparatus of Claim 29, wherein the mount surface comprises an end surface of a row of seats.

31. A channel illumination device comprising a plurality of the LED modules of Claim 1 in combination with at least one channel defined by a plurality of walls and a bottom surface, wherein the LED modules are mounted on at least one of the walls of the channel illumination device.

32. The channel illumination device of Claim 31, wherein the plurality of LED modules are electrically connected in parallel relative to each other.

33. The channel illumination device of Claim 32, wherein the LED modules are spaced at least about ½ inch from a top surface of the walls.

34. The channel illumination device of Claim 32, wherein the walls and bottom surfaces are coated with a diffusely-reflective coating.

35. The channel illumination device of Claim 32, wherein the modules are arranged to direct substantially all of the light emitted by the LEDs toward the walls and bottom surfaces.

36. The channel illumination device of Claim 35, wherein the walls and bottom surfaces are coated with a diffusely-reflective coating.

37. The channel illumination device of Claim 31, wherein the at least one channel wall comprises a heat conducting surface.

38. A modular lighting apparatus for conducting heat away from a light source of the apparatus, the apparatus comprising:

a plurality of light emitting diodes (LEDs); and

a circuit board comprising a main body and a plurality of electrically conductive contacts, each of the LEDs electrically communicating with at least one of the contacts in a manner so that the LEDs are configured in a series array, each of the LEDs electrically communicating with corresponding contacts at an attachment area defined on each contact, an overall surface of the contact being substantially larger than the attachment area;

wherein the plurality of contacts are arranged adjacent a first side of the main body and are in thermal communication with the first side of the main body, the main body electrically insulating the plurality of contacts relative to one another.

39. The modular lighting apparatus of Claim 38, wherein the main body is electrically nonconductive.

40. The modular lighting apparatus of Claim 38, wherein the main body is electrically insulated from the contacts.

41. The modular lighting apparatus of Claim 40, wherein the main body is metallic.

42. The modular lighting apparatus of Claim 38, wherein the main body has a thermal conductivity greater than about 100 W/mK.

43. The modular lighting apparatus of Claim 42, wherein the contacts have a thermal conductivity greater than about 100 W/mK.